

Remarks/Arguments:

Claims 1-10 and 14-28 were pending in the application at the time of the Office Action. Claim 23 is canceled herewith and some of its features incorporated into claim 1, which is further amended to delete the feature relating to heat-seal strength. New claims 29-31 are added herewith, as supported in previous claim 1. No new matter has been added.

Claim Rejections - 35 USC § 103

1. Claims 1-10 and 14-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Podhajny (US 2003/0091767 A1) in view of Sugiura et al. (US 5,296,238). Applicants respectfully request withdrawal of the rejection for at least the following reason.

With reference to the amended claims, there is no mention whatsoever in Podhajny of a coating which provides a barrier to water vapor/oxygen transmission. In this regard, it is noted that there is no disclosure of PVDC, PCTFE, PE or PP in the list of polymers recited at paragraph [0031] of Podhajny. This being the case, even if the skilled person had combined the teaching of Sugiura with Podhajny, he/she would still not have arrived at a film as defined in claim 1. Accordingly, the subject matter of claim 1 is non-obvious over Podhajny in view of Sugiura, and Applicants respectfully submit that the rejection has been overcome.

2. Claims 1-10 and 14-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Konagaya et al. (EP 0 846 418 A1) in view of Sugiura et al. (US 5,296,238). Applicants respectfully request withdrawal of the rejection for at least the following reasons.

As the Examiner notes, Konagaya teaches mixing an inorganic and/or organic anti-bacterial agent and a hydrophilic substance to produce an anti-bacterial composition. And as indicated in the Abstract and in the Field of the Invention, the presence of a hydrophilic substance is essential. "The present invention relates to an antibacterial composition comprising an inorganic and/or organic antibacterial agent and a hydrophilic substance."¹

Konagaya defines what he means by "hydrophilic substance" as follows. "The term 'hydrophilic substance' used herein refers to a substance which is superior in affinity for water and which can be dissolved or dispersed in water and can retain water or moisture and can swell with water. The hydrophilic substance is an organic compound or a high

¹ Konagaya, Field of the Invention

molecular compound containing at least one of a hydroxyl group, amino group, amide group, carboxyl group or alkali metal salts thereof, sulfonic acid group or alkali metal salts thereof, quaternary ammonium salt group and amine salt group, or an organic compound or a high molecular compound containing at least one of polyether chain and polyamine chain."²

Konagaya's compositions must include a hydrophilic substance, and all of them do. The Examiner points to Konagaya page 9, lines 28 to 34 to note that such compositions may in turn be mixed with a thermoplastic or thermosetting resin to form a molded article. Applicants note, however, that doing so would not produce a film having on its surface a polymeric coating containing the antibacterial agent, as in Applicants' invention. Elsewhere, where Konagaya describes coating compositions according to his invention, a hydrophilic substance is an essential component of the coating and is indeed always included.³

It is noted that there is no overlap between the polymers recited in amended claim 1 and those that Konagaya defines as hydrophilic. Indeed, a feature common to all of the polymers recited in claim 1 as amended is that they are not hydrophilic. Konagaya attributes the high anti-bacterial activity of his compositions to the inclusion of a hydrophilic substance.⁴ Therefore, when faced with the teaching of Konagaya that the coating must include a hydrophilic polymer, there is no reason why the skilled person would have chosen to instead use one of the polyolefins recited in claim 1, all of which are known not to be hydrophilic. Indeed, to do so would have involved destroying the invention as Konagaya defines it.

Accordingly, when faced with the problem of providing a film which, for a given amount of antimicrobial agent, provides greater anti-microbial activity for a relatively thinner coating and which has vapor and/or oxygen barrier properties, there is no teaching in Konagaya which would have motivated the skilled person to form a coating using PVDC, PCTFE, PE or PP in place of the hydrophilic substances described in Konagaya in the expectation of obtaining an effective anti-bacterial film. Even if the skilled person had made the proposed combination with Sugiura, he/she would simply have incorporated anti-bacterial particles into the coating of Konagaya and would not have changed the hydrophilic

² Konagaya, paragraph spanning pages 6-7

³ See Konagaya's Examples


⁴ Konagaya, Abstract

substance to a non-hydrophilic polymer. This combination would not have led to the subject matter of claim 1 and its dependents, and so the rejection should be withdrawn.

Conclusion

For the reasons given above, Applicants submit that the application is in condition for allowance and respectfully request notification of same. Applicants invite the Examiner to contact Frank Tise, undersigned, if it appears that this may expedite examination.

Respectfully submitted,



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